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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/606,565

06/26/2003

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14169US02

4707

23446 7590 12/21/2009  
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EXAMINER

WONG, BLANCHE

ART UNIT

PAPER NUMBER

2476

MAIL DATE

DELIVERY MODE

12/21/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/606,565	<b>Applicant(s)</b> SESHADRI ET AL.	
	<b>Examiner</b> BLANCHE WONG	<b>Art Unit</b> 2476	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed September 14, 2009 have been fully considered but they are not persuasive.
2. With regard to independent claims 1,11,21, Applicants state that "the combination of Sawyer and Williamson does not disclose or suggest at least the limitation of 'said at least one of said plurality of access devices generates and maintains a handoff candidate list on its own without being prompted to do so by another access device.'" Remark, p.13. Applicants further explain "Sawyer does not disclose that at least one of a plurality of access devices generates and maintains a handoff candidate list on its own without being prompted to do so by another access device. The Examiner then relies for support ... of Williamson." Remark, p.14. Applicants points out that the wireless communication device of Williamson "replaces the record for the second base station with a corresponding record for the first base station." Remark, p.15. Applicants' interpretation is "In this regard, Williamson's wireless device constructs the neighbor list after being prompted by the base station by virtue of receiving the neighbor list message. ... Only then, the wireless device builds the active neighbor list from the received neighbor list message." Remark, p.15. However, Examiner respectfully disagrees with Applicants' interpretation of Williamson. Examiner notes that Applicants are specifically speaking to the point in time after "by virtue of receiving the neighbor list message" to differentiate Williamson. As understood by the Examiner, Applicants is trying to say that "generates ... on its own ..." in the

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claim language means “generates from scratch” and not just a new neighbor list by replacement. In essence, a replacement or a new neighbor list is a “generates” too. Evidence of Applicants’ true interpretation can be found in the amended Specification dated August 11, 2008. Para. [48.1], discloses “AD 306 may dynamically keep a record ... of the frequency and corresponding signal strength of any received channel it encounters. Such record of frequencies and signal strengths may serve as a handoff candidate list.” That is, the handoff candidate list is generated/created at the first encounter and is maintained/kept at subsequent encounters. If a point in time to define “generates” is important, such a limitation is not found in the claims.

3. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

4. Additionally, Examiner notes that the application of claims 1,11,21 is to an inter-mesh network using 802.11 protocol with PLCP. It is the exchange of PLCP that exists in 802.11 between the access point and the access device, inter-mesh as oppose to intra-mesh, that enables the access device to generate and maintain a handoff candidate list on its own. Such differentiations (inter-mesh, 802.11, PLCP) are just as important as the differentiation outlined above.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1,2,8-10,11,12,18-20,21,22,28-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawyer et al. (U.S. Pat No. 5,915,221) in view of Williamson et al. (U.S. Pat No. 5,953,320)

With regard to claim 1, Sawyer discloses

coupling a first wireless access point (**B1-B10 in Fig. 1, col. 5, line 15**) located in a first cell of the mesh network (**Cell A-Cell J in Fig. 1, col. 5, line 13**) to at least a second wireless access point (**B1-B10 in Fig. 1, col. 5, line 15**) located in a second cell of the mesh network (**Cell A-Cell J in Fig. 1, col. 5, line 13**);

providing service initially to at least one of a plurality of access devices (**M1-M10 in Fig. 1, col. 1, line 31**) in the mesh network by said first wireless access point located in said first cell (**"a plurality of mobile stations M1-M10 may be found within Cell A-Cell J", col. 5, lines 30-31**); and

serving within the mesh network, said at least one of a plurality of access devices by said at least a second wireless access point located in said second cell (**mobile assisted handoff, col. 6, lines 60-61**), wherein whenever a signal for said at least one of a plurality of access devices falls below a specified threshold (**handoff criteria, col.**

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**7, line 28)**, said at least a second wireless access point is selected from said handoff candidate list **(neighbor cell list, col. 7, line 11)**.

However, Sawyer fails to explicitly show said at least one of said plurality of access devices generates and maintains a handoff candidate list on its own without being prompted to do so by another access device.

In an analogous art of handoff with neighboring list, Williamson discloses said at least one of said plurality of access devices generates **("In response to the received Neighbor List Message ..., the mobile station builds the active neighbor list table at block 202", col. 7, lines 38-41)** and maintains **("... the mobile station begins the construction of a temporary neighbor list by replacing the record ... in the existing neighbor list (the neighbor list build in block 202) ....", col. 8, lines 8-12)** a handoff candidate list on its own without being prompted to do so by another access device.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Williamson, with Sawyer, for the benefit of a more efficient handoff scheme. Williamson, col. 5, lines 12-22.

With regard to claims 2,12,22, Sawyer further discloses said second cell is a neighboring cell located adjacent to said first cell **(neighbor cell list, col. 7, line 11)** **(See A/so Fig. 1)**.

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With regard to claim 8,18,28 Sawyer discloses coupling said first wireless access point located in said first cell to at least a third wireless access point located in said first cell **(See Fig. 1) (If two cells are made into one cell, then there are two BTSs in one cell)**.

With regard to claims 9,10,19,20,29,30, Sawyer discloses when said signal falls below said specified threshold **(handoff criteria, col. 7, line 28)**.

7. Claims **3-6,13-16,23-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawyer and Williamson as applied to claims 1,11,21 above, and further in view of Gray (U.S. Pat No. 6,108,323).

With regard to claims 3,4,13,14,23,24, the combination of Sawyer and Williamson discloses the method, a computer-readable medium, and a system according to claims 2 and 3, 12 and 13, 22 and 23, respectively. However, the combination fails to explicitly show beamforming antenna coupled to an access point.

Gray discloses beamforming antenna coupled to an access point **(a beamforming antenna of a base station, col. 3, lines 45-46)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Gray, with Sawyer and Williamson, in order to allow system capacity and demand on system resources to be dynamically adjusted.

Gray, col. 3, lines 22-23.

With regard to claims 5,15,25, the combination of Sawyer, Williamson and Gray discloses the method, a computer-readable medium, and a system according to claims 4,14,24 respectively.

Gray further discloses an uplink channel **(forward link with one or more base stations, col. 3, line 44)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Gray, with Sawyer and Williamson, in order to provide for duplex communication between access point and device.

With regard to claims 6,16,26, the combination of Sawyer, Williamson and Gray discloses the method, a computer-readable medium, and a system according to claims 5,15,25 respectively.

Gray further discloses a downlink channel **(forward link with one or more base stations, col. 3, line 44) (the base station that receives the forward link, has the downlink)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Gray, with Sawyer and Williamson, in order to provide for duplex communication between access point and device.



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8. **Claims 7,17,27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawyer, Williamson, and Gray as applied to claims 6,16,26 above, and further in view of Noll et al. (U.S. Pat No. 7,092,714).

With regard to claims 7,17,27, the combination of Sawyer, Williamson and Gray discloses the method, a computer-readable medium, and a system according to claims 6,16,26 respectively. However, the combination does not explicitly show a backhaul channel.

Noll discloses a backhaul channel (**a backhaul channel, col. 1, line 36**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Noll, with Sawyer, Williamson and Gray, in order to provide for strengthened communication with repeaters for receiving and transmitting information to/from the mobile communications devices. Noll, col. 1, lines 31-33.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BLANCHE WONG whose telephone number is (571)272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Blanche Wong/

Examiner, Art Unit 2476

December 15, 2009

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2476